

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph on page 17 with the following amended paragraph:

It is to be noted that the Streptomyces sp. Mer-11107 was deposited as FERM P-18144 at the National Institute of Bioscience and Human-Technology Agency of Industrial Science and Technology (1-3, Higashi 1-chome Tsukuba-shi, Ibaraki-ken 305-8566 Japan) as of December 19, 2000, and then transferred to International Deposit FERM BP-7812 at International Patent Organism Depositary (IPOD) National Institute of Advanced Industrial Science and Technology (Tsukuba Central 6, 1-1, Higashi 1-Chome, Tsukuba-shi, Ibaraki-ken 305-8566 Japan) as of November 27, 2001. The A-1544 strain was deposited as FERM BP-8446 at International Patent Organism Depositary National Institute of Advanced Industrial Science and Technology (Tsukuba Central 6, 1-1, Higashi 1-Chome, Tsukuba-shi, Ibaraki-ken 305-8566 Japan) as of July 23, 2002, and then transferred to International Deposit FERM BP-8446 as of July 30, 2003, at International Patent Organism Depositary (IPOD) National Institute of Advanced Industrial Science and Technology (Tsukuba Central 6, 1-1, Higashi 1-Chome, Tsukuba-shi, Ibaraki-ken 305-8566 Japan). The A-1560 strain was deposited as FERM P-19585 at International Patent Organism Depositary National Institute of Advanced Industrial Science and Technology (Tsukuba Central 6, 1-1, Higashi 1-Chome, Tsukuba-shi, Ibaraki-ken 305-8566 Japan) ~~the National Institute of Bioscience and Human-Technology Agency of Industrial Science and Technology (1-3, Higashi 1-chome Tsukuba-shi, Ibaraki-ken 305-8566 Japan)~~ as of November 13, 2003 and then transferred to International Deposit FERM BP-10102 as of August 19, 2004, at International Patent Organism Depositary (IPOD) National Institute of Advanced Industrial Science and Technology (Tsukuba Central 6, 1-1, Higashi 1-Chome, Tsukuba-shi, Ibaraki-ken 305-8566 Japan).

Please replace the paragraph beginning on page 34, line 18 and ending on page 35, line 9 with the following amended paragraph:

The "unsaturated C₂₋₂₂ alkyl group" used in the specification of the present application indicates a linear or branched alkenyl group having 2 to 22 carbon atoms or a linear or branched

alkynyl group having 2 to 22 carbon atoms, such as vinyl group, allyl group, 1-propenyl group, isopropenyl group, 2-methyl-1-propenyl group, 2-methyl-2-propenyl group, 1-butenyl group, 2-butenyl group, 3-butenyl group, 1-pentenyl group, 1-hexenyl group, 1,3-hexadienyl group, 1,5-hexadienyl group, 1,3-hexanedieryl group, 1,5-hexanedieryl group, ethynyl group, 1-propynyl group, 2-propynyl group, 1-butyryl group, 2-butyryl group, 3-butyryl group, 1-ethynyl-2-propynyl group, 2-methyl-2-propynyl group, 1-pentyryl group, 1-hexynyl group, 1,3-hexadiynyl group or 1,5-hexadiynyl group. 1,3-hexanediynyl group or 1,5-hexanediynyl group. It preferably indicates a linear or branched alkenyl group having 2 to 10 carbon atoms or a linear or branched alkynyl group having 2 to 10 carbon atoms, such as vinyl group, allyl group, 1-propenyl group, isopropenyl group, ethynyl group, 1-propynyl group, 2-propynyl group, 1-butyryl group, 2-butyryl group or 3-butyryl group.

Please replace the paragraph beginning on page 35, line 19 and ending on page 36, line 36 with the following amended paragraph:

The "5-membered to 14-membered heteroaryl group" used in the specification of the present application means a monocyclic, bicyclic or tricyclic 5-membered to 14-membered aromatic heterocyclic group which contains one or more of hetero atoms selected from the group consisting of a nitrogen atom, sulfur atom and oxygen atom. Preferred examples thereof are a nitrogen-containing aromatic heterocyclic group such as pyrrolyl group, pyridyl ~~pyridinyl~~ group, pyridazinyl group, pyrimidinyl group, pyrazinyl group, triazolyl group, tetrazolyl group, benzotriazolyl group, pyrazolyl group, imidazolyl group, benzimidazolyl group, indolyl group, isoindolyl group, indolizinylyl group, purinyl group, indazolyl group, quinolyl ~~quinolinyl~~ group, isoquinolyl ~~isoquinolinyl~~ group, quinolizinylyl group, phthalazinyl group, naphthyridinyl group, quinoxalinylyl group, quinazolinyl group, cinnolinyl group, pteridinyl group, imidazotriazinyl group, pyrazinopyridazinyl group, acridinyl group, phenanthridinyl group, carbazolyl group, carbazolinyl group, perimidinyl group, phenanthrolinyl group, phenazinyl group, imidazopyridinyl group, imidazopyrimidinyl group, or pyrazolopyridyl ~~pyrazolopyridinyl group or pyrazolopyridinyl~~ group; a sulfur-containing aromatic heterocyclic group such as thienyl group or benzothienyl group; and an oxygen-containing aromatic heterocyclic group such as

furyl group, pyranyl group, cyclopentapyranyl group, benzofuranyl ~~benzofuryl~~ group or isobenzofuranyl ~~isobenzofuryl~~ group; an aromatic heterocyclic group containing two or more different hetero atoms, such as thiazolyl group, isothiazolyl group, benzothiazolyl group, benzothiadiazolyl group, phenothiazinyl group, isoxazolyl group, furazanyl group, phenoxazinyl group, oxazolyl group, isoxazolyl group, benzoxazolyl group, oxadiazolyl group, pyrazolooxazolyl group, imidazothiazolyl group, thienofuranyl group, furopyrrolyl group or pyridoxazinyl group, of which a preferred example is thienyl group, furyl group, pyridyl ~~pyridinyl~~ group, pyridazinyl group, pyrimidinyl group or pyrazinyl group.

Please replace the paragraph beginning on page 37, line 1 and ending on line 15 with the following amended paragraph:

The "3-membered to 14-membered nitrogen-containing non-aromatic heterocyclic group" used in the specification of the present application means a monocyclic, bicyclic or tricyclic 3-membered to 14-membered non-aromatic heterocyclic group containing one or more nitrogen atoms. Preferable examples thereof include an azilidinyl group, azetizyl group, pyrrolidinyl group, pyrrolyl group, piperidyl ~~piperidinyl~~ group, piperazinyl group, homopiperidinyl group, homopiperazinyl group, imidazolyl group, pyrazolidinyl group, imidazolidinyl, morpholinyl group, thiomorpholinyl group, imidazolinyll group, oxazolinyll group and quinuclidinyl group. The nitrogen-containing non-aromatic heterocyclic group also includes a group derived from a pyridone ring and a non-aromatic condensed ring (such as a group derived from a phthalimide ring or succinimide ring).

Please replace the paragraph beginning on page 37, line 16 and ending on line 25 with the following amended paragraph:

The "C₂₋₂₂ alkanoyl group" used in the specification of the present application means a group corresponding to the above-defined "C₁₋₂₂ alkyl group" in which the end thereof is a carbonyl group. Examples thereof ~~thereof~~ include acetyl group, propionyl group, butyryl group, iso-butyryl group, valeryl group, iso-valeryl group, pivaloyl ~~pivalyl~~ group, caproyl group, decanoyl group, lauroyl group, myristoyl group, palmitoyl group, stearoyl group and arachidoyl

group. Preferable examples thereof include alkanoyl groups having 2 to 6 carbon atoms such as acetyl group, propionyl group, butyryl group or iso-butyryl group.

Please replace the paragraph beginning on page 38, line 7 and ending on line 14 with the following amended paragraph:

The " C_{3-23} unsaturated alkanoyl group" used in the specification of the present application means a group corresponding to the above-defined " C_{2-22} alkyl group" to which end a carbonyl group is bonded. Examples thereof include an acryloyl group, propioloyl group, crotonoyl group, iso-crotonoyl group, oleoyl ~~oleoyl~~ group and linolenoyl group. Preferable examples thereof include unsaturated alkanoyl groups having 2 to 6 carbon atoms and specifically an acryloyl group.

Please replace the paragraph beginning on page 38, line 25 and ending on page 39, line 14 with the following amended paragraph:

The " C_{1-22} alkoxy group" used in the specification of the present application means a group corresponding to the above-defined " C_{1-22} alkyl group" to which end an oxygen atom is bonded. Suitable examples thereof are methoxy group, ethoxy group, n-propoxy group, isopropoxy group, n-butoxy group, iso-butoxy group, sec-butoxy group, tert-butoxy group, n-pentyloxy group, iso-pentyloxy group, sec-pentyloxy group, n-hexyloxy group, iso-hexyloxy group, 1,1-dimethylpropoxy group, 1,2-dimethylpropoxy group, 2,2-dimethylpropoxy group, 2-ethylpropoxy group, 1-ethyl-2-methylpropoxy group, 1,1,2-trimethylpropoxy group, 1,2,2-trimethylpropoxy group, 1,1-dimethylbutoxy group, 1,2-dimethylbutoxy group, 2,2-dimethylbutoxy group, 2,3-dimethylbutoxy group, 1,3-dimethylbutoxy group, 2-ethylbutoxy group, 1,3-dimethylbutoxy group, 2-methylpentyloxy group and 3-methylpentyloxy group. ~~3-methylpentyloxy group and hexyloxy group.~~

Please replace the paragraph beginning on page 40, line 7 and ending on page 41, line 12 with the following amended paragraph:

The "5-membered to 14-membered heteroaryl group" used in the specification of the present application means a group corresponding to the above-defined "5-membered to 14-membered heteroaryl group" to which end an oxygen atom is bonded. Specific examples thereof are pyrrolyloxy group, pyridyloxy group ~~pyridinyloxy group~~, pyridazinyloxy group, pyrimidinyloxy group, pyrazinyloxy group, triazolyloxy group, tetrazolyloxy group, benzotriazolyloxy group, pyrazolyloxy group, imidazolyloxy group, benzimidazolyloxy group, indolyloxy group, isoindolyloxy group, indolizinyloxy group, purinyloxy group, indazolyloxy group, quinolyloxy group, isoquinolyloxy ~~quinolinyloxy group~~, ~~isoquinolinyloxy~~ group, quinolizinyloxy group, phthalazinyloxy group, naphthyridinyloxy group, quinoxalinyloxy group, quinazolinylloxy group, cinnolinyloxy group, pteridinyloxy group, imidazotriazinyloxy group, pyrazinopyridazinyloxy group, acridinyloxy group, phenanthridinyloxy group, carbazolyloxy group, carbazolinylloxy group, perimidinyloxy group, phenanthrolinyloxy group, phenazinyloxy group, imidazopyridinyloxy group, imidazopyrimidinyloxy group, pyrazolopyridyloxy ~~pyrazolopyridinyloxy group~~, ~~pyrazolopyridinyloxy~~ group, thienyloxy group, benzothienyloxy group, furyloxy group, pyranlyloxy group, cyclopentapyranlyloxy group, benzofuryloxy group, isobenzofuryloxy group, thiazolyloxy group, isothiazolyloxy group, benzothiazolyloxy group, benzothiadiazolyloxy group, phenothiazinyloxy group, isoxazolyloxy group, furazanyloxy group, phenoxazinyloxy group, oxazolyloxy group, isoxazoyloxy group, benzoxazolyloxy group, oxadiazolyloxy group, pyrazolooxazolyloxy group, imidazothiazolyloxy group, thienofuranyloxy group, furopyrryloxy group and pyridoxazinyloxy group, of which a preferred example is thienyloxy group, furyloxy group, pyridyloxy group, pyridazyloxy group, pyrimidyloxy group or pyrazyloxy group.

Please replace the paragraph beginning on page 42, line 8 and ending on page 45, line 3 with the following rewritten paragraph:

Examples of the substituent in the term "may have a substituent" used in the specification of the present application include those selected from the group consisting of:

- (1) halogen atom;
- (2) hydroxyl group;
- (3) thiol group;
- (4) nitro group;
- (5) nitroso group;
- (6) cyano group;
- (7) carboxyl group;
- (8) sulfonyloxy group;
- (9) amino group;
- (10) a C₁₋₂₂ alkyl group (for example, methyl group, ethyl group, n-propyl group, isopropyl group, n-butyl group, iso-butyl group, sec-butyl group and tert-butyl group);
- (11) an unsaturated C₂₋₂₂ alkyl group (for example, vinyl group, allyl group, 1-propenyl group, isopropenyl group, ethynyl group, 1-propinyl group, 2-propinyl group, 1-butylnyl group, 2-butylnyl group and 3-butylnyl group);
- (12) a C₆₋₁₄ aryl group (for example, phenyl group, 1-naphthyl group and 2-naphthyl group);
- (13) a 5-membered to 14-membered heteroaryl group (for example, thienyl group, furyl group, ~~pyridyl~~ ~~pyridinyl~~ group, pyridazinyl group, pyrimidinyl group and pyrazinyl group);

(14) a 3-membered to 14-membered nitrogen-containing non-aromatic heterocyclic group (for example, aziridinyl group, azetidyl group, pyrrolidinyl group, pyrrolyl group, piperidyl ~~piperidinyl~~ group, piperazinyl group, imidazolyl group, pyrazolidinyl group, imidazolidinyl, morpholinyl group, imidazolinyl group, oxazolinyl group and quinuclidinyl group);

(15) a C₁₋₂₂ alkoxy group (for example, methoxy group, ethoxy group, n-propoxy group, iso-propoxy group, sec-propoxy group, n-butoxy group, iso-butoxy group, sec-butoxy group and tert-butoxy group);

(16) a C₆₋₁₄ aryloxy group (for example, phenoxy group, 1-naphthyloxy group and 2-naphthyloxy group);

(17) a C₇₋₂₂ aralkyloxy group (for example, benzyloxy group, phenethyloxy group, 3-phenylpropyloxy group, 4-phenylbutyloxy group, 1-naphthylmethyloxy group and 2-naphthylmethyloxy group);

(18) a 5-membered to 14-membered heteroaryloxy group (for example, thienyloxy group, furyloxy group, pyridinyloxy group, pyridyloxy ~~pyridazinyl~~ group, pyrimidinyloxy group and pyrazinyloxy group);

(19) a C₂₋₂₃ alkanoyl group (for example, acetyl group, propionyl group, butyryl group, iso-butyryl group, valeryl group, iso-valeryl group, pivaloyl ~~pivalyl~~ group, caproyl group, decanoyl group, lauroyl group, myristoyl group, palmitoyl group, stearoyl group and arachidoyl group);

(20) a C₇₋₁₅ aroyl group (for example, benzoyl group, 1-naphthoyl group and 2-naphthoyl group);

(21) a C₃₋₂₃ unsaturated alkanoyl group (for example, acryloyl group, propioloyl group, crotonoyl group, iso-crotonoyl group, oleoyl ~~oleyl~~ group and linolenoyl group);

(22) a C₂₋₂₃ alkanoyloxy group (for example, acetoxyl group, propionyloxy group and acryloxy group);

(23) a C₂₋₂₂ alkoxy carbonyl group (for example, methoxy carbonyl group, ethoxy carbonyl group, n-propoxy carbonyl group, iso-propoxy carbonyl group, n-butoxy carbonyl group, iso-butoxy carbonyl group, sec-butoxy carbonyl group and tert-butoxy carbonyl group);

(24) an unsaturated C₃₋₂₂ alkoxy carbonyl group (for example, vinyloxy carbonyl group, aryloxy carbonyl group, 1-propenyloxy carbonyl group, isopropenyloxy carbonyl group, propalgyloxy carbonyl group and 2-butyloxy carbonyl group);

(25) a C₁₋₂₂ alkylsulfonyl group (for example, methanesulfonyl group, ethanesulfonyl group, n-propanesulfonyl group and iso-propanesulfonyl group);

(26) a C₆₋₁₄ arylsulfonyl group (for example, benzenesulfonyl group, 1-naphthalenesulfonyl group and 2-naphthalenesulfonyl group); and

(27) a C₁₋₂₂ alkylsulfonyloxy group (for example, methanesulfonyloxy group, ethanesulfonyloxy group, n-propanesulfonyloxy group and iso-propanesulfonyloxy group).

Please replace the paragraph beginning on page 82, line 8 and ending on page 83, line 8 with the following rewritten paragraph:

A medium containing 2.0% of soluble starch, ~~Stabilose~~, 2.0% of glucose, 2.0% of a soybean meal (Honen Soypro), 0.5% of yeast extract and 0.32% of CaCO₃ and having a pH of 7.4 was prepared. A 250 mL Erlenmeyer flask was charged with 25 mL of the medium, which was then sterilized under heating at 121°C for 20 minutes and thiostrepton was added to the medium such that its final concentration was 25 mg/L. Then, 1% of an A-1544/pIJDMG strain from frozen seed was inoculated to culture the seed at 28°C and 220 rpm for 3 days. 1% of the seed culture broth was added in a medium having the same composition to carry out main culturing at 28°C and 220 rpm for 2 days. After the main culturing was finished, mycelia were collected from the culture broth by centrifugation and suspended in 20 mL of phosphate buffer solution having a pH of 6.5. The substrate 11107H (100 g/L DMSO solution) was added in this mycelia suspended solution such that its final concentration was 2000 mg/L to run a conversion reaction at 28°C and 220 rpm for 16 hours.

Please amend the paragraph beginning on page 84, line 9 and ending on page 85, line 9 with the following amended paragraph:

A medium containing 2.0% of soluble starch, ~~stabilose~~, 2.0% of glucose, 2.0% of a soybean meal (Honen Soypro), 0.5% of yeast extract and 0.32% of CaCO_3 and having a pH of 7.4 was prepared. A 250 mL Erlenmeyer flask was charged with 25 mL of the medium, which was then sterilized under heating at 121°C for 20 minutes and thiostrepton was added to the medium such that its final concentration was 25 mg/L. Then, 1% of an A-1544/pIJDMG strain from frozen stock was inoculated to cultivate the seed culture at 28°C and 220 rpm for 3 days. 1% of this seed culture broth was added in a medium having the same composition to carry out main cultivation at 28°C and 220 rpm for 2 days. After the main cultivation was finished, mycelia were collected from the culture broth by centrifugation and suspended in 20 mL of phosphate buffer solution having a pH of 6.5. The substrate 11107L (100 g/L DMSO solution) was added to this mycelia suspension solution such that its final concentration was 1600 mg/L to run a conversion reaction at 28°C and 220 rpm for 16 hours.